

ART. XXXVI.—Notes on Nomenclature of New Zealand Geometrina.

By E. MEYRICK, B.A.

[Read before the Philosophical Institute of Canterbury, 1st October, 1885.]

THE publication of Scudder's "Nomenclator Zoologicus" has enabled me to ascertain that in adopting a certain class of generic names in the *Geometrina* I committed a great indiscretion, since these names appear to have been mostly already employed generically. I have, therefore, re-named those genera which had titles pre-occupied by others, reverting to my usual system. The following changes are made:—

*Parysatis*, Meyr., to be *Paradetis*, Meyr.  
*Panopæa*, Meyr., to be *Pancyma*, Meyr.  
*Eurydice*, Meyr., to be *Homodotis*, Meyr.  
*Harpalyce*, Meyr., to be *Probolæa*, Meyr.  
*Stratonice*, Meyr., to be *Arctesthes*, Meyr.  
*Thyone*, Meyr., to be *Asaphodes*, Meyr.  
*Hermione*, Meyr., to be *Aulopola*, Meyr.  
*Hippolyte*, Meyr., to be *Epicyme*, Meyr.  
*Arsinoe*, Meyr., to be *Anachloris*, Meyr.  
*Pasithea*, Meyr., to be *Notoreas*, Meyr.  
*Statira*, Meyr., to be *Statlmonyma*, Meyr.  
*Atossa*, Meyr., to be *Epicasis*, Meyr.  
*Phyllodoce*, Meyr., to be *Gonophylla*, Meyr.

For *Amastris*, Meyr., the name of *Sestra*, Walk., may be adopted.

The genus described as *Scotosia*, Stph., is (as I have pointed out elsewhere) not the true *Scotosia*, but is identical with *Cephalissa*, Meyr., with which it may be included, the points of distinction relied on being found insufficient.

*Caccysodos*, Butl., is identical with *Dichromodes*, Gn., which latter name must be retained; the species will therefore be *Dichromodes nigra*.

ART. XXXVII.—On the Spiders of New Zealand.

By A. T. URQUHART.

[Read before the Auckland Institute, 19th October, 1885.]

Plates VI.—VIII.

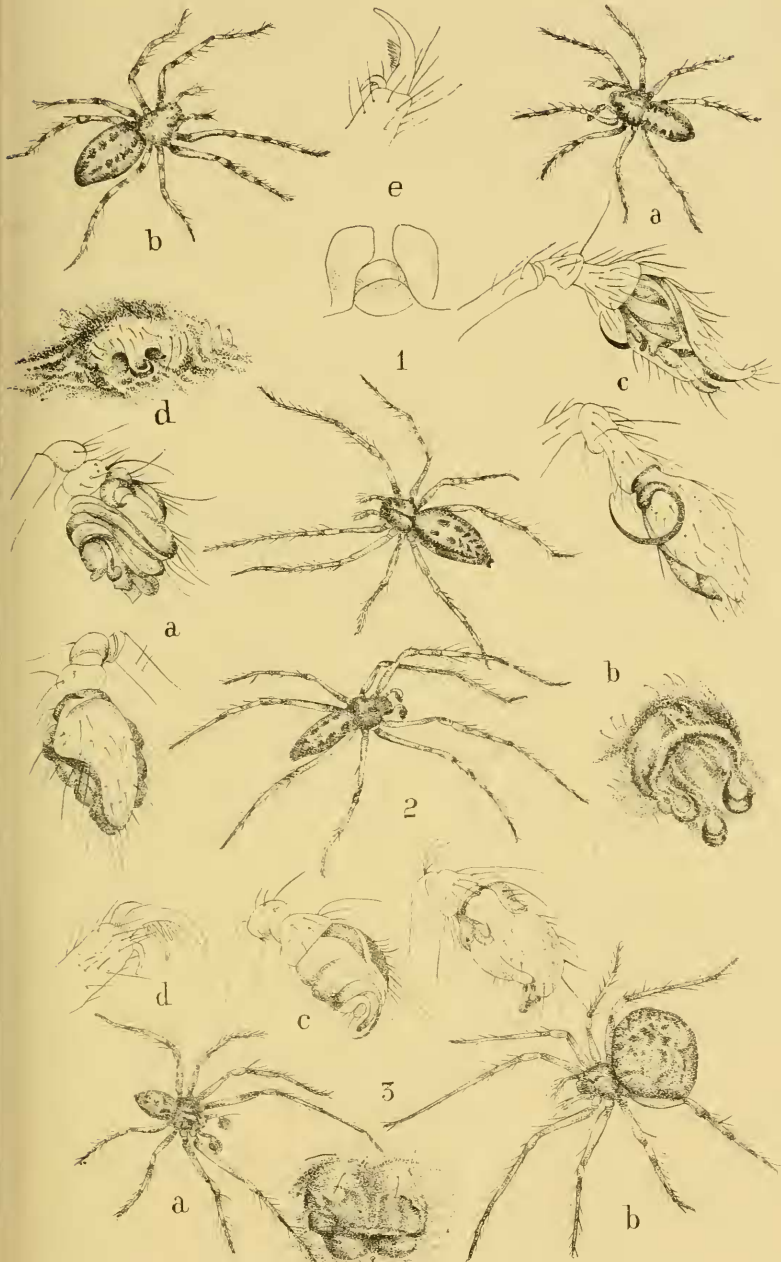
Fam. THERIDIIDÆ.

Genus *Linyphia*, Latr.

*Linyphia diloris*, sp. n. Pl. VI., fig. 1.

Length of an adult female 5 mm., and of an adult male 4 mm.

*Cephalothorax* oval; mahogany-brown, rugulose; lateral marginal constrictions at caput moderate; median indentation



This species is common in damp spots beneath open manuka, under long grass, etc; spins a fine horizontal web across hollows. Pairs in October–November.

Te Karaka, Auckland, A.T.C.

*Linyphia trisphathulata*, sp. n. Pl. VI., fig. 2.

Length of an adult female 3 mm., and of an adult male 3 mm.

*Cephalothorax* oval, moderately constricted at caput; rugulose, glossy, yellowish, or light greenish-brown; lateral margins and wide median band dark olive-green; median indentation somewhat lozenge-shaped, apex directed posteriorly; normal grooves rather faint; *clypeus* slightly concave, projects forwards; equals half depth of facial space.

*Eyes* disposed in two slightly arched transverse rows, forming a narrow oval space; four centrals form a trapezoid, longer than broad; anterior pair close, darkest and much the smallest of eight; hind-centrals largest of eight, placed on black oval tubercular eminences, rather more than their diameter from each other, and the hind-laterals next to them; lateral eyes seated obliquely on rather strong black tubercles, more than their diameter apart, and less than that space from the fore-centrals.

*Legs* slender, long; relative length 1, 4, 2, 3; i., ii., iv. nearly equal; colour of cephalothorax; tibiæ and metatarsi have olivaceous annulations; armature few dark hairs and slender spines; superior tarsal claws, 1st pair, rather weak, slightly curved, about 10 short, close teeth, increasing in length; inferior claw smaller than superior, bent, one tooth, point behind.

*Palpi* have tints and armature of legs; palpal claw weak, straight, apparently no teeth.

*Falces* vertical, slightly divergent; pale-amber; three teeth outer row, inner small points.

*Maxillæ* nearly twice as long as broad, obliquely truncated on outer side, inclined towards *lip*, which is about as broad as long, everted, dark hue.

*Sternum* broad cordate, blackish-brown, pitted.

*Abdomen* ovoid, pointed posteriorly, projects forwards; petiolum rather long; yellowish or brownish mottled with a lighter tint; two irregular (in some examples partially composed of spots) dark-chocolate bands converge from base towards spinners; at posterior end are a series of dark angular lines whose vertices are directed forwards. *Ulna* somewhat circular, prominent, membranous, rugose, brownish eminence, concave within; tibia on posterior side produced into clear pale-amber coloured ladle-shaped apophyses with reddish margins, projecting from between the latter is a similar but longer apophysis.

*Male* does not differ essentially from female, legs rather longer, and abdomen slimmer; specific pattern in some examples

consists of a double row of spots. *Palpi* pale yellow; humeral joint long, cubital and radial short, latter cup-shaped, few dark strong hairs; digital joint large, ovoid, convex, and moderately hairy externally; palpal organs complex, series of flattish lobes projecting forwards; on upper side, close to articulation of digital and radial joints, is a remarkable dark-red crescent-shaped process. Projecting forwards on the lower side is a pale greenish membrane, margins dark, rounded, serrated.

Taken amongst low vegetation; forms a fine open horizontal web across hollows in shady places. Commences pairing about November.

Te Karaka, Auckland, A.T.U.

Genus **Theridium**, Walck.

*Theridium varium*, sp. n. Pl. VI., fig. 3.

Length of an adult female 7 mm., and of an adult male  $4\frac{1}{2}$  mm.

*Cephalothorax* broad oval, moderately constricted in front; yellowish-brown, suffused about margins and furrows with dark brown; median fovea somewhat oval, deep; radial and caput striæ moderate; profile contour low arch; *clypeus* slightly prominent, in height more than half facial space.

*Eye* disposed in two transverse curved rows, forming a narrow oval space; four centrals form a quadrilateral figure rather longer than broad; hind-centrals rather more than their diameter apart, and a diameter and a half from the hind-laterals; fore-centrals dark, seated on brown tubercular prominences; laterals close, placed obliquely on moderate tubercles; these eyes and hind-centrals have a pearly lustre.

*Legs* long, moderately slender; 1, 4, 2, 3 = 16, 13, 11, 8 mm.; clear light-brown, annulated; armature strong dark hairs and bristles; superior tarsal claws, 1st pair, moderately strong and curved, free, and more than half claw, tip bent; 6 teeth, 5 basal rather strong comb-teeth, increasing in length; outer strongest and longest, curved backwards; inferior claw smaller than superior, sharply bent, one curved tooth.

*Palpi* colour and armature of legs; palpal claw short, sharply curved, 7 long open comb-teeth, forming an even line with point of claw.

*Falces* conical, slender, nearly vertical, yellowish-brown, few sharp teeth.

*Maxillæ* long, obliquely truncated on outer side, yellowish-brown, inclined towards *lip*, which is twice as broad as long.

*Abdomen* large, very convex above, projects over base at cephalothorax; pointed at spinners; ground colour light-brown, spotted and blotched with dark greenish-brown, few light streaks; median band irregular, somewhat leaf-like, between it and spinners are a few angular marks, apices directed forwards;

lateral margins dark oblique streaks; branchial opercula orange-red. *Genital* organ large, concave within; anterior membrane or labrum forms a narrow transversely wrinkled hood, centrally produced into a tapering process, directed backwards; labium large, dark, everted.

*Male* much smaller than female, less distinctly marked, tints darker. Actual and relative length of *legs* differ from females, 1, 2, 4, 3 = 14, 11, 9, 7 mm.

*Palpi* furnished with black hairs, have the bright-reddish hue of legs, with exception of radial and digital joints, which have a blackish-brown tint; humeral joint long, cubital and radial short, latter cup-shaped; digital joint oval, convex, and hairy externally, convexities directed towards each other; concave within, palpal organs simple lobes, terminating with a broad, concave, curved greenish membranous process, with dark margins.

( $\alpha$ ) *Cephalothorax* light yellow-brown, faintly suffused with dark tint. *Legs* shade lighter than cephalothorax, annuli moderately marked. *Abdomen* dull, pale yellow-brown, spotted and marked with dark-brown, specific pattern more or less obliterated. *Male* has more or less light tints of female.

( $\beta$ ) *Cephalothorax* glossy brown-black. *Legs* clear light-brown, or greenish-brown, annulations dark. Pattern on *abdomen* resembles type form, but darker. *Male* has the characteristic dark coloration of the variety.

( $\gamma$ ) Marks on *abdomen* black, resemble type form, ground colour slaty-grey, mottled with creamy-white.

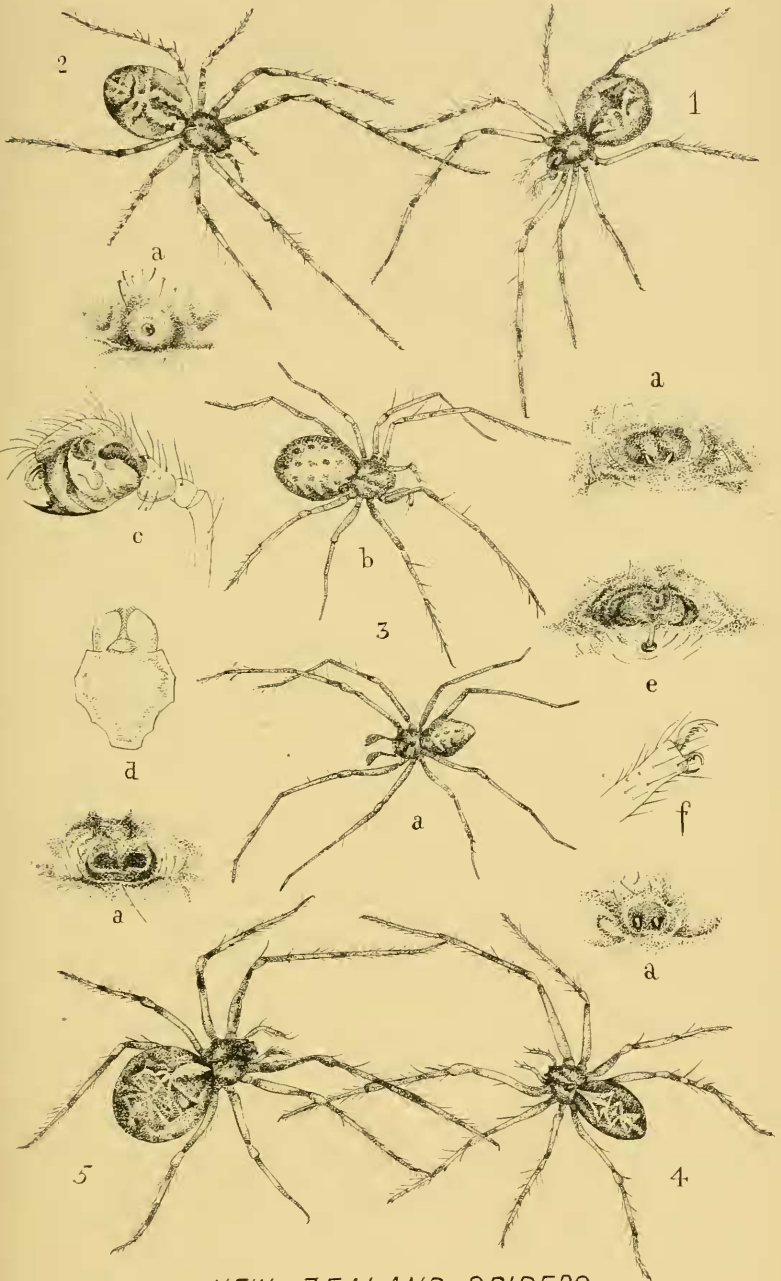
This species is common about buildings, and is to be met with on shrubs. Commences pairing about October; young rarely hatched before November. Cocoons are fabricated throughout the summer until the end of May, when mature examples—as is generally the case with species of this family—become scarce during the winter months. The female usually constructs from 2 to 4 pea-shaped cocoons about 10 mm. in depth, composed of light-brown silk, of a soft felty texture, containing from 60–350 unagglutinated spherical straw-coloured eggs. The web is of normal form—viz., a series of lines intersecting one another in different planes, and at various angles.

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*Theridium veruculatum*, sp. n. Pl. VII., fig 1.

Length of a mature female 4–4½ mm., and of an adult male 3 mm.

*Cephalothorax* oval, moderately constricted in front; glossy, yellowish-brown colour, suffused with a darker hue; caput convex, well-defined; indentation below eyes; thoracic fovea large, somewhat circular; radial striæ moderate; contour of profile arched; *clypeus* prominent, in height about equal to depth of ocular area.



NEW ZEALAND SPIDERS.

A.T.U. del.





Four central *eyes* nearly form a square; fore-pair furthest apart, dark, placed on prominent tubercles, hind-pair less than their diameter apart; laterals contiguous, seated obliquely on moderate tubercles; hind-laterals more than their diameter from posterior median eyes; fore-laterals close to anterior-centrals; side and hind intermediate eyes have a pearl-grey lustre.

*Legs* slender, relative length 1, 4, 2, 3 = 9, 7, 6,  $4\frac{1}{2}$  mm.; clear pale-brown, dark annuli, furnished with black hairs and fine erect bristles; superior tarsal claws, 1st pair, moderately strong and curved, seven comb-teeth pointing forwards, increasing greatly in length and strength, apical teeth have form of free end of claw, and are directed outwards; inferior claw smaller than superior, sharply bent, free and long and fine, one strong tooth, point behind.

*Palpi* slender, clear pale-brown, terminal joints reddish-brown, digital joint furnished with strong black hairs; palpal claw has seven teeth, increasing in length, directed forwards.

*Palces* slender, vertical, brownish-amber colour.

*Maxilla* long, linear, obliquely truncated on outer side, yellowish, inclined towards *lip*, which is broader than long, obtuse, dark.

*Sternum* cordate, brownish.

*Abdomen* broad-oval, slightly cleft at base, very convex above, pointed at spinners; clothed with nearly erect light hairs, ground colour brownish, mottled and marked with various tints of brown, buff, and purple; a purple and brown lance-like mark with buff margins extends more than half across median line, on lateral margins are a series of oblique marks; ventral surface brownish-yellow, fine hairs. Between branchial opercula extends a transverse greenish-brown eminence, semicircular on anterior side, in centre of eminence is a somewhat circular depression—the genital organ; labia on posterior side terminate in two dark, conical processes directed outwards.

The *male* is only 3 mm. in length, does not differ essentially in colouration or markings from female; *cephalothorax* more elongated; *abdomen* slimmer, petiolum exposed. Only marked difference in *legs*, little shorter. *Palpi* moderately long and slender, straw-coloured, except two apical joints which have an amber hue. Humeral joint long; cubital and radial short, about equal in length, furnished with bristles, latter joint cup-shaped; digital joint oviform, convex, and sparsely haired externally, convexities directed towards each other; palpal organs simple, form a glossy, rugose lobe, partially truncated, with slight dark indentation at about two-thirds of its length, tapering and roundly pointed at apex; connected with darkish indentation, and projecting slightly forwards, is a reddish margined membrane.

(*a.*)—Dull light brownish-umber, bright colours absent, specific marks brownish.



This species spins a web of normal form about buildings, on trees, etc.; fabricates its first cocoons in November, they have a broad-oval form, 3 mm. in diameter, greenish-brown, of a soft felty texture, suspended by fine lines, contain about 128 unagglutinated, spherical, straw-coloured eggs. Pairs about end of October.

Te Karaka, Auckland, *A.T.U.* Common in the district.

*Theridium blattens*, sp. n. Plate VII., fig. 2.

Length of a mature female,  $2\frac{1}{2}$  mm.

*Cephalothorax* broad-oval, moderately constricted at caput, which is prominent; median indentation transverse oval; it is glossy, greenish-yellow, suffused with dark olive; profile line rises abruptly from thoracic junction, dips into indentation, then forms a moderate arch across caput. *Clypeus* prominent, slopes forward, about half facial space.

Four central *eyes* form a square, anterior pair prominent, dark, and rather smaller than the rest, which are flatter, have a pearly lustre, and placed on lake-coloured eminences; hind-centrals are about as far from each other as they are from the hind-laterals next to them—a space equal to their diameter; laterals nearly contiguous, seated obliquely on small tubercles, fore-pair close to anterior-centrals.

*Legs* long, slender, 1, 4, 2, 3; clear yellowish-brown, black annulations; armature fine erect hairs, long bristles; superior tarsal claws, 1st pair, rather weak and straight, tip bent, seven comb-teeth increasing in length and strength; interior claw smaller than superior, moderately bent, one pointed tooth.

*Palpi* moderately long, resemble legs in colour and armature; palpal claw short, curved, 4 long comb-teeth, forming an even line with point of claw.

*Falces* vertical, slender, yellowish, suffused with dark-olive, fangs short.

*Maxillæ* broad, somewhat rounded on inner, and obliquely truncated on outer side, moderately inclined towards *labium*, which is rather broader than long, somewhat pointed.

*Sternum* broad-cordate; these parts are dark-brown.

*Abdomen* oviform, broad, pointed at spinners, projects over base of cephalothorax, very convex above; ground-colour pale-purple and yellowish tints, thickly marked with small purple spots; wide central and transverse black bands, margined with pale-yellow at their extremities, form a large cross-like figure; ventral surface black, few yellow spots, spinners short. *Vulva* prominent brownish circular eminence, orifice large.

Te Karaka, Auckland, *A.T.U.*

*Theridium pumilio*, sp. n. Plate VII., fig. 3.

Length of an adult female,  $1\frac{3}{4}$ –2 mm., and of an adult male,  $1\frac{1}{2}$  mm.

*Cephalothorax* broad-oval; lateral marginal constrictions at caput moderate; clear pale stone-colour, rugæ scale-like; median band and lateral margins dark-olive; median indentation broad shield-shaped; contour of profile slight double arch; *clypeus* prominent, less than half facial space.

Four intermediate *eyes* are placed on oval black spots, and form a trapezoid longer than broad, whose shortest side is in front; fore-centrals dark, smallest of eight; space between hind-centrals—which, with side eyes, have a pearly lustre—is less than an eye's diameter, and the interval between each and the hind-lateral next to it more than an eye's breadth; laterals contiguous, seated obliquely on dark tubercular prominences, nearly their diameter from fore-centrals.

*Legs* long, slender, 1, 2, 4, 3; more transparent than cephalothorax; armature few dark hairs and strong erect bristles; superior tarsal claws, 1st pair, slightly curved from base, straightening at free end, tips bent; about 7 comb-teeth, increasing in length and strength; inferior claw smaller than superior, bent sharply downwards and outwards, apparently only one tooth.

*Palpi* long, slender, resemble legs in colour and armature; palpal claw like tarsal claw, 5 teeth.

*Falces* vertical, divergent, normal clear hue; double row of teeth, 3 outer strong.

*Maxilla* somewhat oviform, apices and inner margins fringed with black hairs, inclined towards *labium*, which is broader than long, prominently everted, dark hue, pale apex.

*Sternum* broad-cordate, normal hue.

*Abdomen* oviform, convex above, yellowish, more or less mottled with various shades of reddish-brown—in some examples faint; three longitudinal olivaceous spotted lines converge from base to spinners; lateral margins and ventral surface marked with streaks of similar colour; in some examples dark marks on cephalothorax and abdomen nearly absent, and buff patch at posterior end of abdomen prominent. *Vulva* large, somewhat coniform, concave within, exterior rugose membrane has tints of tortoise-shell, with a pale median band terminating at margin in a pale amber-coloured spoon-shaped, short apophysis, directed backwards; orifice large, somewhat reniform; projecting from posterior margin of labia is a second spoon-shaped apophysis, longer and larger.

*Male* nearly equals female in length, *cephalothorax* broader, striæ more defined, lateral margins have pinkish eminences over each coxal joint. *Palpi* yellowish, humeral joint long, cubital and radial short, latter cup-shaped; digital joint broad-oviform, convex and hairy externally, convexities directed towards each other; palpal organs simple, series of reddish lobes, projecting beyond them on lower side is a pointed black process.

*Abdomen* somewhat diamond-shaped, yellowish, mottled with orange-red, buff patch at posterior end; series of olivaceous spots form median band; streaks and marks on lateral margins and ventral surface.

Mature examples, especially females, may generally be taken throughout the winter months. Until winter rains set in, these little spiders are often numerous about pastures and amongst low native vegetation in damp spots. They spin a fine horizontal web, with a small triangular mesh; one portion is drawn up to a stem or blade, beneath which the spider rests.

Te Karaka, Auckland, *A.T.U.*

*Theridium calyciferum*, sp. n. Pl. VII., fig. 4.

Length of an adult female, 4 mm.

*Cephalothorax* broad-oval, lateral marginal constrictions at caput moderate; rugulose, brownish-yellow; caput, median band and marginal zone brown; fovea large, somewhat oval; radial and caput striæ well-defined; contour of profile rises from thoracic junction at an angle of  $45^\circ$ , notched at median indentation, caput slightly arched; *clypeus* convex, in height rather less than half facial space.

*Eyes* about equal in size, seated on black spots; four centrals nearly form square, anterior pair furthest apart, dark; hind-pair are one eye's breadth from each other, and rather more than that space from fore-centrals; laterals nearly contiguous, placed obliquely on tubercles; more than their diameter from hind-centrals.

*Legs* long, slender, relative length, 1, 4, 2, 3 = 10, 7, 6, 5 mm.; yellowish, dark annuli at articulation of joints, except tarsal; femora spotted; armature hairs and numerous strong bristles, tarsi of hind pair furnished with, on under side, strong curved hairs; superior tarsal claws, 1st pair, moderately curved, tip bent, 7 teeth increasing in length and strength, 3 apical teeth, strong, in form resemble free end of claw, directed outwards; inferior claw smaller than superior, bent downwards, 1 tooth, point behind.

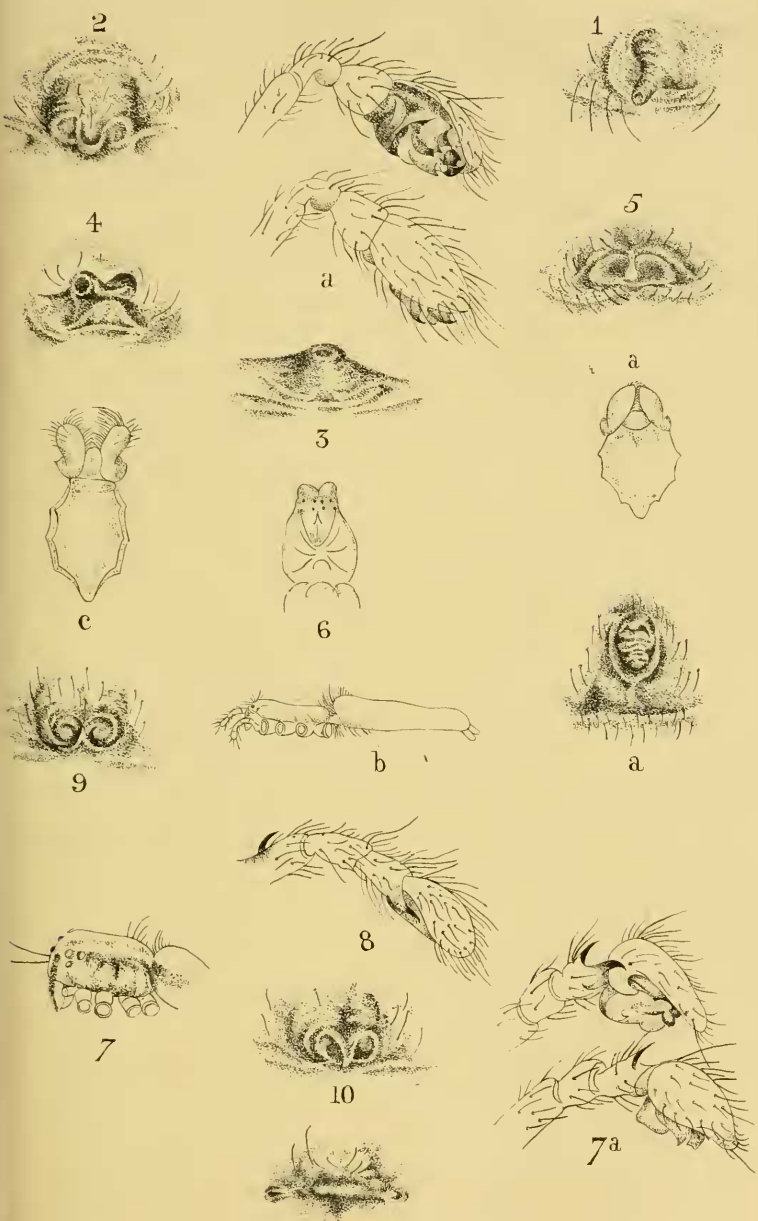
*Palpi* colour and armature of legs, palpal claw resembles tarsal claw, 6 teeth.

*Falces* convex, brownish-yellow, project a little forwards, one socket tooth.

*Maxillæ* somewhat spathulate, yellowish, inclined towards *labium*, which is broad, everted, nearly half length of *maxillæ*, greenish tinge.

*Sternum* heart-shaped, yellowish, margined and spotted with chocolate.

*Abdomen* elongate-oval, dorsal surface covered by a brown ovoid, leaf-like mark, median band strongly dentated, tapering



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posteriorly, creamy color, brown marks; ventral surface light-brown. *Vulva* moderately prominent, circular, concave within, on posterior side are two black cone-like processes, apices directed backwards. Branchial opercula resemble yellowish cup-shaped calyces, acute apices directed towards genital organ.

Te Karaka, Auckland, A.T.U.

*Theridium cruciferum*, sp. n. Plate VII., fig. 5.

Length of an adult female 5 mm., of an adult male 4 mm.

*Cephalothorax* broad oval, slightly compressed before, glossy, light-brown; median band and marginal zone dark-brown; median indentation circular, striæ moderate; profile line rises from thoracic junction at an angle of  $20^{\circ}$ , then slopes across caput. *Clypeus* moderately prominent, in height about two-thirds depth of ocular area.

*Eyes* on dark spots, four central nearly form a square, anterior pair dark, seated on prominences; posterior pair rather more than their diameter apart, and closer to each other than each is to the hind-lateral next to it; laterals placed on tubercles, nearly contiguous.

*Legs* long, slender, 1, 4, 2, 3; first pair dark, ii., iii., iv., yellowish, speckled as far as tarsi, brown annuli at articulation of joints; furnished with few hairs and erect bristles; superior tarsal claws, 1st pair, 8 comb-teeth increasing in length and strength; inferior claw nearly equals superior in strength, 1 strong tooth.

*Palpi* pale yellow, slender, armature of legs; palpal claw 6 teeth, increasing in length and strength.

*Falces* conical, nearly vertical, chocolate-brown, few teeth.

*Maxilla* long, somewhat roundly truncated on outer side, inclined towards *labium*, which is broader than long, rounded; these parts have a greenish-yellow tinge.

*Sternum* broad cordate, rugulose, stained round margins and spotted with purple-brown.

*Abdomen* oviform, convex, pointed at spinners; ground-colour olive-brown; on dorsal surface there is a large brownish-black, nearly ovate, indented leaf-like mark; on the fore part there is in some examples a well-defined cross, the base of which is creamy-white, margined with black, and directed forwards; remaining portions purple, picked out with whitish lines; between cross and spinners are several creamy spots throwing off oblique purple lines; lateral margins have several creamy, purple-spotted bands, and oblique dark bars; round spinners, and on ventral surface, are creamy purple-spotted marks. *Vulva* yellowish-brown, transversely wrinkled, oval eminence, concave within; projecting from anterior side, directed backwards, is a short tapering process, labia form; on posterior side, a dark, tumid, projecting lip, partially cleft in centre.

Male rather shorter than female, *cephalothorax* and *abdomen* more elongated, does not differ essentially in coloration or markings. *Legs* resemble female in colour and armature, but differ in their relative and actual length, 1, 4-2, 3, =13,  $7\frac{1}{2}$ , 5 mm. *Palpi* rather long, slender, clear yellow-brown, sparsely furnished with coarse black hairs; humeral joint long, cubital and radial short, do not differ much in size, slender, cup-shaped; projecting from superior surface of former, are two strong, long bristles; digital joint oval, rugulose, mahogany colour; convex and hairy externally, convexities directed towards each other; concave beneath; palpal organs moderately complex; viewed from beneath, concavity at base is covered, for about one-fourth of length of joint, by a wide membranous band, little beyond transverse band, projecting forwards from margins of concavity are two short and stout apophyses; between these is a shield-shaped eminence, produced at its fore extremity into short, dark, horn-like processes.

Species common, frequents manuka; examples, male and female, differ greatly both in shades of coloration and distinctness of specific pattern; in yellowish or brownish-creamy specimens the cross-like figure is more or less obliterated, and devoid of lake markings. Pairs about November.

Auckland, A.T.U.

*Theridium triloris*, sp. n. Pl. VIII., fig. 1.

Length of an adult female 5 mm., and of an adult male 4 mm.

*Cephalothorax* oval, bright mahogany-brown; lateral marginal constrictions at caput moderate; median indentation, which is somewhat circular, and radial striæ well marked; profile rises with a slight arch to occiput, forepart of which is prominent; *clypeus* moderately prominent, in height equals half facial space.

*Eyes* form two transverse curved rows, convexity of curves directed forwards, hind-curve slight; eyes placed on dark spots; four intermediate form a quadrilateral figure, longer than broad; anterior centrals darkest and rather smallest of eight; interval between hind pair equals their diameter; laterals, which are seated obliquely on dark tubercles, one quarter of their breadth apart, are rather further from hind-centrals than the latter are from each other.

*Legs* rather short, relative length 1, 4, 2, 3; yellow-brown, dark greenish annuli at articulations; armature erect hairs, few bristles; superior tarsal claws, 1st pair, moderately strong, curved, 9 comb-teeth increasing in length and strength; inferior claw rather stout, bent, 2 close teeth, basal small.

*Palpi* resemble legs in colour and armature; palpal claw strong, curved, 7 comb-teeth directed forwards, forming an even line with point of claw,



*Falces* prominent at base, vertical; light red-mahogany colour; one strong tooth near extremity.

*Maxillæ* obliquely truncated on outer side, inclined towards *labium*, which is somewhat oval, more than half length of *maxillæ*, everted; these parts have a brownish tint, *labium* darkest.

*Sternum* broad cordate, rugulose, chocolate-brown.

*Abdomen* oval, moderately convex above, projects over base of cephalothorax; brownish-black, sparingly clothed with fine light hairs; encircled and centrally divided with creamy-coloured disjointed bands; marginal bands extend from spinners along ventral surface to branchial opercula. *Genital* organ vermiform, pendulous, directed backwards; pale amber-colour, extremity reddish; projects from much wrinkled integument of a darker hue.

*Male* shorter and slimmer than female, resembles her in specific pattern, colour, and armature; caput rises higher, projects further forwards, causing hind and especially the fore-row of *eyes* to form a stronger curve.

*Legs* rather longer than female's, i.-iv., ii.-iii., nearly equal, strong black hairs.

*Palpi* mahogany-colour; humeral joint long; cubital and radial short, latter cup-shaped, greenish; digital joint oval, convex, and hairy externally, convexities directed towards each other; palpal organs moderately complex, lobe-like, posterior half dark; projecting at extremity is a broad black, concave, sharply pointed process.

Taken on shrubs; cocoons two or more, whitish, globular, 4 mm. in diameter, suspended by a short silken line to inferior surface of leaf; about 15 light-coloured spherical eggs, not agglutinated together; web normal intricate lines. Pairs in November.

Te Karaka, Auckland, A.T.U.

*Theridium squalide*, sp. n. Plate VIII., fig. 2.

Length of an adult female, 5 mm.

*Cephalothorax* oval, moderately compressed at caput, glossy red-mahogany; median fovea narrow-oval, deep, nearly length of thorax; caput and radial striæ well-marked; contour of profile rises gradually from thoracic junction, forming a slight arch across caput; *clypeus* vertical, convex, indentation below eyes; height equals depth of ocular area.

Four central *eyes* form a trapezoid whose shortest side is between anterior pair, which are smallest of eight; posterior pair less than their diameter apart, rather more than their breadth from hind-laterals; posterior centrals and side eyes have a pearl-grey lustre, latter largest of eight, close, placed obliquely on moderate tubercles.

*Legs* moderately long and slender; 4, 1, 2, 3, iv. pair slightly exceeds i. in length; colour yellowish-amber; armature erect black hairs, few fine bristles; superior tarsal claws, 1st pair, moderately strong and curved, 7 rather short close teeth, increasing in length; inferior claw smaller than superior, bent downwards and forwards, two teeth, basal shortest and stoutest.

*Palpi* rather long and slender, resemble legs in colour and armature, strong hairs on digital joint; palpal claw rather weak, 5 or 6 short teeth.

*Falces* prominent at base, vertical, divergent, rugulose, bright red-mahogany, 3 strong teeth.

*Maxilla* long, linear, somewhat rounded, with lip-like indentation at apex (apparently caused through pressure of fangs), inclined towards *labium*, which is broader than long, everted; these parts have a bright red-mahogany colour.

*Sternum* cordate, pitted, dull mahogany-colour.

*Abdomen* ovoid, yellowish-brown, clothed with light hairs. *Vulva* yellowish brown, transversely wrinkled, somewhat oblong, convex eminence, concave within, projecting posteriorly from anterior side there is a yellowish amber-coloured protuberant lip, with incurved margins.

Te Karaka, Auckland, A.T.U.

*Theridium setiger*, sp. n. Plate VIII., fig. 3.

Length of a mature female, 3 mm.

*Cephalothorax* oval, moderately constricted forwards, caput prominent in front; rugulose, glossy brown-black; median indentation semicircular, convexity directed backwards; normal grooves moderate; profile contour forms a slight arch across caput, roundly curved posteriorly; *clypeus* projects prominently forwards, pointed; indentation below eyes, in height nearly equals depth of ocular area.

*Eyes* large, four centrals form a square; anterior pair dark, placed somewhat obliquely on angular projections; posterior row, rather less than their diameter apart, form a slight curve, convexity of curve directed backwards; lateral eyes, which have the pearly lustre of hind-centrals, are contiguous, and seated obliquely on reddish-brown tubercles, space between them and fore-centrals rather less than interval between latter pair.

*Legs* moderately long and strong, relative length, 1, 4, 2, 3; i. longest, ii. nearly equals iv.; pellucid-grey, well-defined black-brown annulations; armature strong hairs, few bristles. Superior tarsal claws, 1st pair, moderately curved, 7 comb-teeth, increasing in length and strength; inferior claw fine, bent, apparently no teeth.

*Palpi* resemble legs in colour and armature, palpal claw strong, curved, 5 long comb-teeth forming an even line with point of claw.

*Falces* tapering, project slightly forwards, reddish-brown.

*Maxilla* acute oval, inclined towards *lip*, which is nearly twice as broad as long; everted, one-third length of maxillæ.

*Sternum* broad cordate; these parts are chocolate-brown, rugulose.

*Abdomen* broad oval, strongly convex above, rises somewhat abruptly from thoracic junction; sparingly clothed with strong erect hairs and bristles; ground colour greenish-brown, slightly suffused with dull-pink, mottled with brown-black; median band faint, tapers towards spinners, black marks at base; on lateral margins are four oblique brown-black bars, streaked on posterior side with pink, converge towards spinners, which are short. *Vulva* somewhat conical, reddish-black, prominent eminence, orifice circular, large.

Te Karaka, Auckland, A.T.I.

*Theridium zantholabio*, sp. n. Plate VIII., fig. 4.

Length of an adult female, 4 mm.

*Cephalothorax* broad oval, constricted anteriorly; light amber-colour; median band brown, lateral margins faintly mottled with a similar hue; median indentation broad, U-shaped, large, moderately depressed; contour of profile rises at an angle of 40°, then slopes slightly to ocular area; *clypeus* prominent, in height about half facial space.

Four intermediate *eyes* form square, anterior pair dark; posterior pair less than their diameter apart, about that space from side-eyes, which are smallest of eight, contiguous, placed obliquely on small tubercles.

*Legs* moderately long and slender, relative length 1, 4, 2, 3; have hue of cephalothorax, rather faint brown annulations; armature dark hairs and erect bristles; superior tarsal claws, 1st pair, curved, 5 long comb-teeth; inferior claw moderately strong, free and fine, bent, 1 tooth, small point behind.

*Palpi* resemble legs in colour and armature, palpal claw curved, 7 long comb-teeth, forming an even line with point of claw.

*Falces* project slightly forwards, moderately slender, dark amber-colour, about 3 blunt teeth.

*Maxillæ* long, linear, roundly truncated on outer side, moderately inclined towards *labium*, which is nearly twice as long as broad, somewhat pointed; these parts have a reddish-amber hue, suffused with brown.

*Sternum* cordate, yellowish, margined with chocolate.

*Abdomen* oviform, convex above, yellowish-brown, suffused with dull pink; a broad, somewhat spatulate, irregularly pinnatifid median band, dark brown at basal end, lighter and spotted at truncated apex, extends two-thirds across the abdomen; lateral margins spotted and streaked; transverse

dark bands on ventral surface. Anterior portion of *vulva* consists of a reddish-black oblong, transverse, tapering eminence, circular fovea at either end, projecting upwards; on posterior side is a large, broad, clear yellow incurved lip.

Web consists of irregular lines; cocoons ovoid, yellowish-brown, undulations shaded with brown, loose felty texture; contain about 40 pale straw-coloured spherical eggs, not agglutinated together, but wrapped in a second delicate soft silky cocoon.

Taken in March; Cliffs, North Shore, Auckland, *A.T.U.*

*Theridium sericum*, sp. n. Pl. VIII., fig. 5.

Length of a mature female 9 mm., and of immature male 5 mm.

*Cephalothorax* broad-oval, glossy, yellowish-brown, moderately constricted in front; median fovea circular, radial and caput striæ moderately marked; contour of profile rises at an angle of 45° from thoracic junction to verge of median indentation, then slopes across caput. *Clypeus* convex, prominent, in height more than half facial space.

*Eyes* disposed in two transverse curved rows, forming a narrow oval space; four intermediate eyes nearly form a square; anterior pair darkest and rather smallest of eight; posterior pair rather less than their diameter apart, and more than that interval between them and lateral eyes next to them; side eyes contiguous, placed obliquely on small black tubercles, have the pearly lustre of hind-centrals.

*Legs* moderately long and strong, 1, 4, 2, 3 = 18, 15, 14, 10 mm.; reddish-brown; armature fine dark hairs and slender bristles; superior tarsal claws, 1st pair, moderately curved, free and thickening a little, tip bent inwards, 7 comb-teeth rapidly increasing in length and strength, strong teeth have somewhat the form of free end, directed forwards; inferior claw sharply bent, 2 teeth differing in size, close together.

*Palpi* resemble legs in colour and armature, palpal claw resembles superior tarsal claw, 7 teeth.

*Falces* convex, tapering, directed moderately forwards, few teeth, bright light-mahogany colour.

*Maxilla* long, pointed, much inclined towards labium, which is somewhat oval, apex truncated, less than half length of maxillæ; these organs have a reddish-brown hue, apices light.

*Sternum* broad cordate, yellowish-brown, few dark hairs.

*Abdomen* oviform, convex above; chocolate-colour, series of four or five creamy-brown angular bars on dorsal surface, few fine dark hairs, abdomen has a soft silky lustre. *Fulva* on anterior side forms a low wrinkled, membranous arched hood, centrally produced into a yellowish spathulate process, directed backwards; moderately concave within, yellowish; oblong olivaceous mark in centre.

*Male* smaller than female, resembles her in form, markings, and colour. *Legs*, relative length, 1, 4, 2, 3 = 11, 9, 8½, 7 mm.

Some examples of this species are of a very dark brown-chocolate colour, specific pattern faint. These spiders are not uncommon in buildings, and under bags; mature examples may be taken throughout the winter months. Their webs are formed of fine lines, with a silky lustre, intersecting one another in various planes and at different angles. Cocoons are fabricated from about December to May, resemble loose balls, 10 mm. in diameter, of soft white wool; are suspended by a few short lines, generally close to the walls or roof, visible within are about 88–120 whitish spherical eggs, not agglutinated together.

Te Karaka, Auckland, *A.T.U.*

Fam. THOMISIDÆ.

Sub-Fam. PHILODROMINÆ.

Genus *Hemiclæa*, Thorell.

*Hemiclæa plautus*,\* sp. n. Plate VIII., fig. 6.

Length of an adult female, 13–15 mm.

*Cephalothorax* oval, very depressed, one-fourth longer than broad, moderately constricted forwards; mahogany-colour, glossy, rugose; sparsely clothed with light-yellowish pubescence, few interspersed fine plumose hairs, and erect black hairs, mostly about lateral margins. *Caput* relatively wide, squarely truncated, three depressions on median line, two anterior foveæ circular; basal depression forms with thoracic indentation a fiddle-like mark; *caput* and radial striæ distinct. Contour of profile level. *Glypeus* projects sensibly forwards, in height less than diameter of a fore-central eye.

*Eyes* small; posterior row slightly curved, convexity of curve directed forwards; median eyes smallest of eight, flat, and rather closer to one another than each is to the lateral eye next to it; anterior row shortest, straight; intermediate eyes, which are largest of eight, rather more than their radius apart, and about twice that interval from fore-laterals, form with hind-centrals a trapezoid whose anterior side is shortest; space between fore and hind intermediate eyes more than diameter of a fore-central; interval between laterals, which are seated on slight eminences, nearly equals space between hind-laterals and hind-centrals.

Relative length of *legs* 4–2, 3–1 = 23, 18 mm.; in some

\* Since this paper was read, through the courtesy of P. Goyen, Esq., of Dunedin, I received a brief description of Koch's *H. rogenhaferi*, to which *H. plautus* bears so close resemblance that it may not retain specific rank.

examples 4, 2, 3, 1; yellowish or reddish-brown, sparsely furnished with fine erect hairs; 1 or 2 spine-like bristles on femora, upper side; i.-ii. pair rather stoutest; 2 spines at base of metatarsi; tibiæ of ii. pair 1 spine; tibiæ of iii.-iv., 3 spines; metatarsi, 5 spines; exingninal joint of iv. longest. Tarsal claws, 1st pair, coarse, slightly sinuated, free, and curved into a hook; inner claw, 15 teeth; basal end has 12 long fine comb-teeth increasing in length, 3 coarse at extremity of row, curving backward; outer claw 12 sparse teeth, increasing greatly in length and strength, curving backwards; 4th pair, inner claw, 10 teeth increasing greatly in length, 4 terminal teeth sparse; outer, 8 coarse open teeth. The number of teeth on the claws differ in different individuals. Probably the maximum number are given in the described example. Claw-tuft and scapula hairs moderately long, fine, terminal half linearly incrassated, serrated; latter hairs extend to base of matatarsi on i.-ii. pairs.

*Palpi* like legs in colour, strong; long black hairs, spine on humeral joint; digital joint densely clothed with short hairs, 2 long spines beneath palpal claw, which is fine, curved, about 5 teeth.

*Falces* strong, conical, very gibbous, base projects forwards, apices outwards; glossy, reddish-black; fang long, fine.

*Maxillæ* tumid at base, fore-half linear, rounded at apex, directed outwards; strong hairs on inner margin.

*Labium* conical, roundly truncated, more than half length of maxillæ, attached to a broad, projecting, collar-like process; these organs have a reddish-brown colour.

*Sternum* oval, or somewhat vase-shaped, owing to neck-like development of fore-part; brownish.

*Abdomen* elongate-oval, squarely truncated at base; very depressed; colour, graduated tints of light slate and yellow-stone, latter tint predominant on dorsal and ventral surfaces; sparsely clothed with yellowish pubescence, fine plumose hairs, and coarse black hairs; impressed spots prominent; spinners moderately long. *Vulva* large; anterior portion consists of a reddish-black oval, slightly concave, transversely wrinkled eminence, integument on either side towards posterior end swells out into somewhat pear-shaped protuberances, olive-green, or glossy red-brown.

The colouration and remarkably depressed form of this species indicates its natural haunts; mature examples may be found throughout the year under exfoliate bark, etc.; movements rapid. Cocoon constructed in crevices, oval, lenticular, 2 to 3 metres long, composed of soft, close, white silk, attached by its inferior surface, contains about 60 pale-coloured eggs, not adherent among themselves.

Dunedin, *P. Goyen*; Auckland, *A.T.U.*



## Fam. LYCOSIDÆ.

Genus *Lycosa*, Latr.

*Lycosa proxima*, sp. n. Plate VIII., fig. 7.

Length of a mature male or female,  $2\frac{1}{2}$  mm.

*Cephalothorax* oval, slightly constricted in front; somewhat transversely rugose; light yellowish-brown, light and coarse dark hairs; two wide olivaceous bands extend from posterior eyes to base of thorax; faint, somewhat depressed, brown line along dorsal surface; profile line rises from thoracic junction at an angle of  $65^\circ$ , horizontal as far as third row of eyes, then dips rather abruptly. *Clypeus* directed moderately forwards, in height rather more than space between fore-central eyes; olivaceous bands extend from latter eyes to margin.

Anterior row of *eyes* smallest of eight, curved; intermediate pair slightly the largest, black, rather more than their diameter apart, and nearly twice that space from exterior eyes of same row, which have a reddish-pearly lustre, placed on dark collars; eyes of second and third rows have a reddish hue, seated on reddish lake-coloured tubercles; second row shorter than first, third about equal.

*Legs* moderately long and slender, nearly equal in length, apparently 4, 1, 2, 3; light yellowish-brown; armature dark hairs, numerous long erect spines; superior tarsal claws, 1st pair, curved, free, and directed somewhat forwards, about 9 small comb-teeth, increasing slightly in length, pointing forwards; inferior claw short, sharply bent, apparently no teeth.

*Palpi* moderately long, resemble legs in colour and armature; humeral joint stout, two long erect spines on upper side, rather exceeds cubital and radial joints in length, latter articles about equal in size, somewhat cup-shaped, furnished with strong bristles; projecting upwards from fore-part of radial joint is a stout spine, and a short, broad, curved, dark process, upper margin of which is furnished with a row of short comb-like teeth, is produced on outer side at its articulation with the digital joint, which is oviform, partially cleft at tapering apex, convex, and moderately hairy externally; basal end of inferior surface somewhat bulb-like; fore lobes terminate at apex with short, dark, serrated, membranous projections.

*Falces* conical, directed slightly inwards; fangs short; normal hue; olivaceous streaks on frontal margin are continued along entire length of falces.

*Maxillæ* enlarged at apex, about as broad as long, somewhat roundly truncated on inner side, normal yellow-brown hue.

*Labium* short, somewhat oval, dark.

*Sternum* heart-shaped, brownish.

*Abdomen* oviform. widest towards posterior end, yellowish-brown, clothed with light hairs; two wide olivaceous bands